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Comprehensive Test Plan
for the
Enhanced Linked Virtual Information System (ELVIS)

Version 1.3.2

(Solaris 2.3 format)

D R A F T

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1. SYSTEM OVERVIEW

The Enhanced Linked Virtual Information System (ELVIS) provides a capability to view tactical information in geographic plots and tabular displays resident in a Global Command and Control System (GCCS) host system and Joint Maritime Command Information System (JMCIS) using a commercial web browser compatible with HyperText Markup Language (HTML) version 3.2, as implemented in the popular browsers. ELVIS software runs on a GCCS/JMCIS host as a group of background processes and does not interfere with normal workstation operations (except for an additional CPU load when servicing browser requests).

ELVIS allows the user to plot selected track data and tactical overlays on high resolution maps. The user can perform a family of query and map manipulation operations, such as track hook, map zoom, and range/bearing calculations. System administration utilities are provided to configure and tune ELVIS. For security, a user login is required to gain access to the tactical information.

2. TEST PLAN

2.1 Installation

2.1.1 Segment installs properly

- If an older version of ELVIS was previously installed, then verify that the conversion of user accounts was successfully completed. Specifically, login as each user and verify that all custom maps were retained. Verify that the sysadmin account was converted. Verify that the VCC was preserved including the VCC thumbnails, VCC buttons (i.e., CMD INFO, OPS, WX, INTEL, COMMS), IDEAS box, and system custom maps (under globe).

- Verify that an entry is made in the crontab file for garbage collection (see the trouble-shooting section of the sysadmin manual for the precise syntax).

2.1.2 Segment re-installs properly

- Verify all user accounts are preserved, including login, passwd, and custom maps.

- Verify sysadmin account is preserved, including VCC thumbnails, VCC buttons (i.e., CMD INFO, OPS, WX, INTEL, COMMS), IDEAS box, and system custom maps (under globe).

- Note that GIF size is not preserved during re-installation (it defaults back to "lowres" 400x300 pixels).

2.1.3 Segment starts and stops properly

- Login and verify all required processes are running (see sysadmin manual). A process status command (i.e., "ps -ef") with a grep for LVIS will show all of the processes
- Log out and verify that only LVIS process is httpd.

2.2 Classification Banner

2.2.1 Verify that the ELVIS security banner matches the UB security banner

- Change the security and verify the change is correctly reflected by both UB and ELVIS

2.3 Garbage Collection

2.3.1 Verify that the cron job for garbage collection runs properly, based on its configuration in the crontab file

- Typically, each user account (/h/LVIS/data/pub/users/*login_name* should only have files within the last 48 hours. This does not include the CUSTOM_MAP files which should not be touched by garbage collection. The purpose of garbage collection is to remove temporary files that are created during normal operations (i.e., when the user is navigating through ELVIS).

2.4 User Accounts

2.4.1 Verify that user accounts can be added, modified, and deleted

- Verify that the user password can be changed by the user and by the sysadmin; verify that the change is successful by logging in.
- Verify that users cannot be given the same login name (although passwords are allowed to be the same); verify that a slash ("/") is not allowed in a login name (since we use this name as a directory name in /h/LVIS/data/pub/users).
- Verify that the sysadmin account cannot be removed
- Verify that the sysadmin password can be changed; verify that the sysadmin password can be reset to "vinson" by running the LVISSA_ResetPasswd utility (see the trouble-shooting section of the sysadmin manual for details).

2.5 Track Database

2.5.1 Verify that ELVIS faithfully plots all UB tracks in the correct location and with the correct color, symbol, and label.

2.5.2 Verify that ELVIS faithfully plots the full range of UB tracks, including

- Real-world, live training, simulated
- Platform, ELINT, acoustic, PLRS/EPLRS, ground unit, LINK
- Air, Surface, etc
- Friendly, hostile, etc
- OTH, network, local (ELVIS plots local tracks resident on the host)

2.6 Normal User Operations

2.6.1 Verify that the user's custom maps display properly, with the associated plot controls, active overlays, and map product (e.g., ADRG, DTED). Verify that system maps display properly, i.e., the wall charts and other system maps

2.6.2 Verify proper operations of all buttons on the toolbar (below tactical GIF) and pull-down MAP OPTIONS menu.

2.6.3 Verify proper operations of the buttons in the VCC, i.e., globe, CMD INFO, BRIEFS, IDEAS, OPS, WX, INTEL, COMMS, FIND, HELP, and EXIT. For information submitted via the IDEAS box, verify that the sysadmin can view the data.

2.6.4 Verify that the user can save custom maps, including the selection of plot controls and active overlays as part of the saved map. Verify that different map products can be included with the custom map, including DMA products and coast line with intensity, fill, and color controls.

2.6.5 Verify proper operation of the "show map coverage" option (under CUSTOM MAPS). The tactical display should show rectangles corresponding to each available map. By clicking in one of the rectangles, the map should automatically load.

2.7 Sysadmin Operations

2.7.1 Verify that the 4 wall chart thumbnails can be configured, complete with plot controls, active overlays, and DMA map products. Note that tracks do not appear when manipulating the tactical display as sysadmin. Whenever a wall chart is change, you must reload the GIF in order to see the new wall chart.

2.7.2 Verify that system custom maps can be saved (and recalled from a user account)

2.7.3 Verify that sysadmin cannot delete MAP1,...MAP4, which correspond to the 4 wall charts. Verify that any other system custom map can be deleted.

2.7.4 Verify that the VCC buttons can be configured, i.e., CMD INFO, OPS, WX, INTEL, and COMMS

2.7.5 Verify that all four GIF sizes work (tiny, low, medium, and high). These are configured in the file /h/LVIS/Scripts/.cshrc.LVIS. You must log out and login at the UB workstation for this change to take effect. Verify proper GIF size as sysadmin and as a normal user (the tiny size is really cute).

2.7.6 Verify that the number of support simultaneous users can be modified. By default, 4 processes, called ChartGrab 1,...ChartGrab 4, are launched and service 4 simultaneous users. The number of ChartGrab processes is controlled by the environmental variable LVIS_NUMCHARTS in /h/LVIS/Scripts/.cshrc.LVIS. Log out of the UB workstation, change the number, log back in, and verify the correct number of ChartGrabs.

2.7.6 Verify that the system logs can be viewed, including the access log, error log, file system, and LVIS process status.

2.8 Browser Variants

2.8.1 Verify all of the above browser-based operations with Netscape 2.x and 3.x, and Microsoft Internet Explorer 3.x and 4.x (when available); these are the only two browsers of interest. It is likely that time will not permit a complete re-test with another browser, so it is recommended that the tester routinely switch back and forth between browser. It may be worthwhile to do all sysadmin testing with one browser and user testing with the other.

2.8.2 Verify that the zoom and rng/brg operations work with MS Internet Explorer (all available versions).

2.9 Stress Test

2.9.1 Verify reasonable operations under stressful conditions, namely, high incoming data rate from LINK 11, UB operator at the workstation performing graphics intensive operations, and multiple ELVIS users accessing tactical displays (suggest 10 simultaneous users).

2.10 VDD Review

2.10.1 Review and test the software changes which are documented in the VDD.

2.10.2 Confirm the known software problems and limitations which are documented in the VDD.